

Aviation News

MCGRAW-HILL PUBLISHING COMPANY, INC.

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Langley Field Test Basin: Although research looking towards supersonic speeds is the prime project at the NACA's Langley Field, Va., laboratory, work is going forward in many other fields as well. Here an engineer makes final adjustments on a B-29 scale model which is to be put through "ditching" tests in one of the laboratory's tanks. The Langley Field laboratory was opened to aviation writers last week for the first time since before the war. (Story on Page 7)

Lockheed Shelves Its Personal Plane Projects

Big Dipper's crash crystallizes decision; personnel costs to be cut 10 percent.....

Campaign To Revitalize NATA Gets Underway

Plans to raise \$100,000 to launch national promotion drive are well received.....

Page 13

after 1659 hours ON A DOUGLAS C-54 the Performance of this

3000 psi
VICKERS PUMP

is "AS GOOD AS NEW"



PERFORMANCE REQUIREMENTS of Series PP-3911 Pumps at Factory	ACTUAL TEST PERFORMANCE of a PP-3911 Pump After 1659 Hours Flight Time On C-54
VOLUMETRIC EFFICIENCY AT 3000 psi AND 3600 rpm	95.0%
OVERALL MECHANICAL EFFICIENCY AT 3000 psi AND 3600 rpm	88.0%
	97.2%
	91.9%

Factory tests of this pump after completing 1659 flying hours on a Douglas C-54 proved that it would still pass inspection for a new pump—that it was still "as good as new." Test data reproduced above indicate that it is substantially better than the high minimum performance requirements for a new Vickers pump both in volumetric efficiency and in overall mechanical efficiency. Careful inspection after disassembly revealed that this pump required no replacement of parts. A synthetic rubber seal was replaced and the pump was then reassembled and returned to service.

This record of continuous service was made without

VICKERS Incorporated •

1404 OAKMAN BLVD., DETROIT, MICH.

Engineers and Builders of **OIL HYDRAULIC EQUIPMENT**
SINCE 1921

THE AVIATION NEWS

Washington Observer



state governments and at least three Senate conferences, led by Sen. Brewster, are adrift in due position.

BACKWARDS MOVE—Personnel of the National Advisory Committee for Aeronautics was reduced by 816 during the last three months of last year. In view of the strange and unusual eight shown, aviation writers at the Langley Field laboratory last week on a preview of things to come that reduction in personnel is a move back in hours and buggy days.

MARINE CAMPAIGN—The Marine Corps is organizing a special campaign to recruit around 1,000 men a month for aviation units. It has its eye on civilian aircraft industries which are reducing their staffs and on personnel eligible for discharge.

WAR ASSETS ADMINISTRATION—The Senior Military Affairs Committee is taking down a pending increase in President Truman's executive order establishing the War Assets Administration to dispose of surplus property in the United States. The Justice Department will be asked for a ruling on the legality of the order. There are some members who hold that the President must ask Congress for permission. Nomination of Lt. Gen. Edmund B. Gregory as War Assets Administrator has been held up pending a decision.

AIRPORT STALEMATE—Progress reported last week on the airport bill now seems to be discontinued. It appears from the goings on on Capitol Hill that there may be no airport bill at all—at least as it is present form. House and Senate conferees have failed to reach an agreement on the allocation of federal funds. Sen. McCarran and House conferees will not give in to a proposal to channel federal airport allocations through

UNIFICATION STRATEGY—It is clear now that the Comair's Defense Council, in theory of organization, will be the spearhead of a campaign to arouse popular demand for unification of the armed forces. Gov. Robert S. Kerr of Oklahoma has accepted chairmanship of the council's advisory board, and announcement of the nominal head of the council itself is due shortly. Most of the leading aviation associations are behind the plan and will be represented on the executive committee.



The Republic Rainbow roars up the runway during first flight tests (Aviation News, Feb. 21)



Still a sign of the times... twenty years later!

In the winter of 1925 a small, loosely-knit group headed by Eddie Stinson started a small, left factory in Detroit to build airplanes.

And Eddie Stinson set about to have his few workers construct a small, fast biplane that they had designed.

When this first Stinson airplane showed up in the plant, they were amazed by a large sign that Eddie Stinson had hung on the wall:

THE PILOT DEPENDS ON YOU!

The New STINSON VOYAGER 150—For Safe, Speedy, Economical Air Travel



New model plane from Stinson Aerocraft Company
See Lockheed Dealer for

Stinson

EASY TO BUY...EASY TO FLY

VOLUME 5 • NUMBER 6

Aviation News
McGraw-Hill Publishing Co., Inc.

February 18, 1946

Attainment of Supersonic Speed By End of This Year Indicated

Concentrated research underway at Langley Field NACA laboratory on all aspects of highspeed flight; engineers forecast operation of 1,600 mph airmail planes within next three years.

By ALEXANDER MCSURELY

Concentrated research as a stimulus of experiments conducted with the NACA wind tunnel is under way at the Langley Field, Va., laboratories of the National Advisory Committee for Aeronautics, gives promise of early fulfillment. A plane now flying, or at the final stages of assembly, may leap the barrier of the speed of sound at any time within the next few months, and it is quite likely this will have happened by the end of 1946. Laboratory research indicates:

Plans Halted.—On the basis of data already compiled in supersonic research with high-speed wind tunnels, dropping models from 40,000 ft altitude and shooting models at supersonic speeds from compressed air guns, NACA engineers are without a prediction.

Planes operating commercially, carrying mail, may be flying at 1,600 mph regularly within three years. Long-distance flights and cargo transports probably will attain such speeds within later.

Supersonic wings appear the type most likely to support the supersonic plane, although NACA researchers are seeking means to combat the supersonic wings' disadvantages at low flight speeds which presumably will be necessary for landing. Trailing edge wings and low aspect ratio wings also have characteristics indicating they may be useful for supersonic flight.

Supersonic propeller blades are likely to exceed the useful speed range of the propeller well beyond 800 mph which previously has been regarded as the upper speed limit for propeller-driven planes.

Propeller-driven planes will become long-range and supersonic.

Improved coatings for propeller-driven gas turbine-powered planes will be another factor in increasing

the present crop. NACA both at Langley Field, and at its other laboratories (Cleveland, Ohio, and Ames, Calif.) already has largely converted to an long-range program with primary emphasis on the problems of supersonic flight.

Better aircraft lubricants will be available for military, private and commercial aviation aircraft. Viscosity, NACA secretary, pointed out, to serve as basic research from which the various branches of aviation may develop their own specialized projects.

New Research Outlined.—Research in connection with high speed flight is taking many forms at the Langley Field laboratory including:

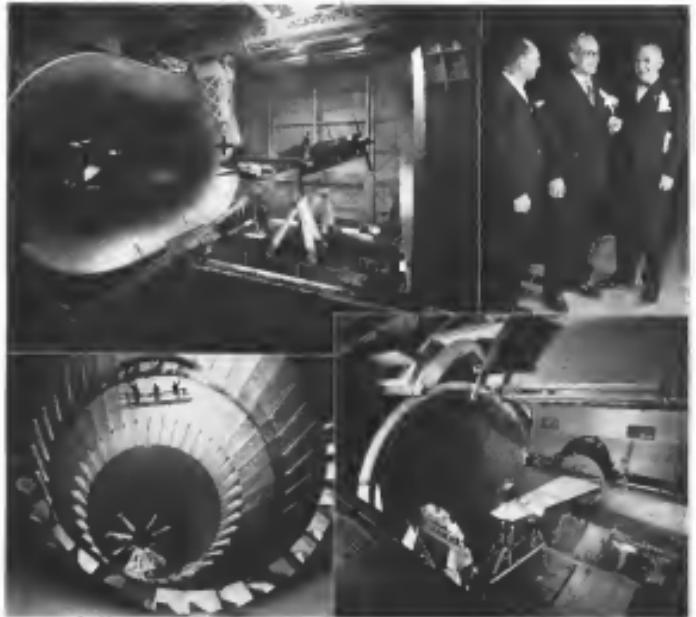
• Use of some 20 wind tunnels of various sizes and specialized uses ranging from the full-scale wind tunnel with a 50- by 30-ft. throat which accommodates full-sized fighter planes to tiny experimental wind tunnel with test section only 8 in. by 8 in. where models of airplane components are tested.

• A cylindrical free flight tank 100 ft. long and 8 ft. in diameter through which models are "shot" by compressed air guns at speeds up to 1,000 mph. For above the sonic speed (590 mph at sea level) by using the tank with French, it is known to have been as a transonic. The apparatus can simulate a speed three times as fast, or approximately 4,200 mph, since the speed of sound in that gas is only one-third of that in air.

• A flutter tunnel with a 40-ft. test



High-Speed Wind Tunnel: This 60-ft. high-speed wind tunnel at the Langley Field NACA laboratory is the scene of careful check-ups on flight characteristics of proposed planes.



Research Center: Three representatives from the 72, which are in operation at the NACA Langley Field, Va., laboratory, pose as visitors to the newly opened research in progress there. The largest is a full-scale tunnel with a 20- by 80-ft throat in which actual airplanes at speeds of the Curtiss-Wright Biplane may be tested at wind speeds up to 120 mph. The 16-ft high-speed tunnel (lower left) can test components such as propellers and nozzles at speeds up to 520 mph and is expected to attain twice speeds

section by section for speeds up to three times the speed of sound, flutter at transonic speeds, and for studying supersonic airflow on propeller sections.

A supersonic sphere filled with press air in which test models can be whirled at the equivalent of three times the speed of sound. This sphere also may be evacuated by a vacuum pump to simulate an altitude of 55,000 ft.

The speed problem of helicopter

rotors, one of the most critical limitations on speed of rotary-wing aircraft, are being studied with a 46-ft helicopter test tower with a motor-driven shaft which will turn full-speed rotors up to 40 ft in diameter from the top of the tower, which turns to study aerodynamic, flutter and vibration.

An auxiliary wind tunnel a few miles away where supersonic missiles are being tested for stability and control. Nozzles were shown

color movies of one of the missiles being launched from the tower, propelled by six solid rocket boosters. Testing of supersonic aircraft models by dropping from 85-29's down at 40,000 ft. The downward path of the models are followed by optical tracking units, and radar units, and instruments within the falling models send automatic reports to telemeter receivers on the ground.

Other Projects: While first em-

phasis on Langley laboratory research is concentrated on high speeds, a wide range of other projects for improvement of aircraft and for being undertaken simultaneously.

A part tunnel in which models of 6-ft wingspan are evacuated at speeds of 200 mph to fly freely through coned vertical airblasts to determine effect of severe updrafts or downdrafts on the model. Data obtained here is being supplemented, with T. G. (Velocity) Gravels, researcher which already have been flown over 300,000 miles under widely divergent conditions in approximately 3,000 civilian and military transport planes. NACA studies show a steady upward trend in gust loadings from 94 lb per sq in for the Boeing 347 transport in 1932, to a leading of 367 lb on a jet plane now in design stage.

Powerful hydraulic testing machine capable of exerting up to 600 tons wrench or crating force on aircraft structural members, including a complete load testing machine designed in the laboratory which can apply a torque or twisting force simultaneously with a tension or compression.

Hydrodynamic tanks where models of seaplanes and flying boats are used to determine and organize stability, control resistance and spray characteristics and where landplane models are used for "ditching" characteristics (See Cover).

An impact basin into which models of airplane floats are catapulted at speeds up to 74 mph and dropped to simulate water landings, measuring impact loads. A water-attenuating device reduces waves it has to make a seaplane impact less violent.

A free-flight tunnel believed the only one of its type in the world, which remotely-controlled scale models are flown in a 16-ft test section under their own power, making possible study of new configurations and designs on aircraft and guided missiles in actual flight.

The pre-war open tunnel in which gust loads are measured as virtually every new military aircraft design (more than 170 types in the last four years) with a record of improved spin characteristics in 35 percent of the designs tested. Energy-saver shapes from spinning model planes are correlated by scaled and weighted dummy plates, to determine the best method of tailoring these test types.

Henry Z. E. Reid, engineer in

AVIATION NEWS • February 18, 1946

Lockheed Shelves Personal Planes

Lockheed Aircraft Corp. last year and still remains concerned with the future of airplane mass production for the home built and took initial steps to keep its personal overhead costs by 50 percent.

The crash a week ago of the company's two-passenger貫cher airplane the Big Dipper, brought no new life to the project, and now the company, which the company now will not attempt an immediate return of the personal aircraft market.

Factors Outlined

Two factors are involved in Lockheed's employment reduction. One is a temporary production cut resulting from the company's decision to postpone production of 40 ordered units of the interim model 49 Constitution in the manufacture of the more luxurious model 440 Constitution, 38 of which are on order. More pertinent, however, is the conversion of the company that since the end of the war, the company has not increased sufficiently to absorb the estimated \$16,000,000 overhead not increased represented by the 15 percent pay raise to hourly employees last November. By reducing the size of its production staff Lockheed is expected to save an \$800,000 annual reduction of overhead expenses without requiring production

Kellett Corp. Developing Twin-Engine Helicopter

What may be the first twin-engine helicopter to fly is under development at Kellett Aviation Corp., Upper Darby, Pa. It is the XB-10, currently planned as an ambulance plane for the AAF but now being considered as a 12-passenger liner.

Delayed by labor difficulties among subcontractors the big Kellett machine is not expected to fly for several months. A meet-up of the transport version may be shown to surface representatives within a few months.

Arnold Rekevers Backing Of National Air Museum

Gen. H. H. Arnold last week received his support of the Bantam-hall to establish a national air museum as testimony before the House Library Committee. The NAA and NACA also endorsed the proposal to organize the air museum under the Smithsonian Institution.

The most controversial aspect of the museum, as developed at Smithsonian, is its location. Arnold reported he has received 263 replies to queries regarding the location. All of them favor immediate establishment of the museum, but division as to its location. The largest portion favors Washington, D. C. Arnold has urged a surplus aircraft factory be used.

Shearman Gets New Post

John Sherman, who has been a special consultant to the Civil Aeronautics Board, acting as liaison between CAA and the State, War and Navy Departments, has been appointed Assistant Director of the Economic Bureau in charge of international affairs. Robert W. Grier, who has been Assistant Director of the Economic Bureau remains in charge of national affairs. Russell B. Adams is Director of the Bureau.

Spaatz Takes Over As AAF Commander

Wants of planes' obsolescence has caused against declining them until new ones are perfected.

Commander of the Army Air Forces has passed from the wartime leader, Gen. H. H. Arnold to Gen. Carl Spaatz, who headed strategic air forces in the European and Pacific theaters.

"The air force of today is yesterday's air force," Gen. Spaatz said. "But we must keep it in being until we have perfected the air force of tomorrow."

Plans Predicted—Spaatz is 44, five years younger than Arnold. His permanent appointment requires congressional approval, regarded as a Congress' condition. He will serve as acting chief in the meantime.

At a formal dinner in Washington, Gen. Arnold, his successor, accompanied what could not be unaccompanied. He largely ran organization of operations since and completely. The Army Air Forces at Arnold was a lengthening number of its commander.

Independence AAF Opposed—Almost coincident with the change in command, Kenneth C. Royal, acting secretary of War, sent a letter to the House Committee on Expenditures in the Executive Department expressing opposition of the War Department to the creation of a separate department of the Air Forces without instituting unified overall command for the Army, Navy and Air Forces under a single department of national defense.

This letter, while before the committee, has been considered by the War Department, Royal has informed the committee, and it is the department's conclusion that these measures providing for a separate air force did not guarantee the most effective use of United States military arms.

Blocked by Eisenhower—He said his stand in opposing the bill was backed by Gen. Eisenhower, Army chief of staff, and Arnold.

The War Department, Royal said, "fully recognizes that one of the lessons at this war is that air power has come of age," and must have parity with land and sea power in time of peace as well as war. He added, however, the department believes that parity test can be attained by following President Truman's recommendation for a single department combining all three branches of the service.



Turning Over Command Gen. Arnold and Gen. Spaatz shake hands at Pentagon ceremony in which the former handed over the reins of the AAF to Spaatz who led the U. S. Strategic Air Forces.

Knorr Named Aide

Gen. Hugh J. Knorr, director of the Air Technical Service Command at Wright Field, has been named special assistant to Gen. Carl Spaatz, newly-appointed Army Air Forces commander.

Gen. Knorr is a veteran of research, technical and administrative work in aircraft design, associated with the type of duty assumed from the establishment of the AAF. Prior to his duty at Wright Field, he was Deputy Commander of the U. S. Strategic Air Forces in Europe and a member of the staff of the commander of the Eighth Air Force Service Command.

He originally was commanded an engine in the Navy later was appointed a special instructor in the Coast Artillery and then transferred to the Air Service and took pilot training in 1917.

Advantages—Royal's letter concluded that creation of a single department would produce these desirable results: 1. Establish an organizational structure providing for unified direction below the President and ensuring an integrated military program and the highest measure of coordination and efficiency of our armed forces; 2. Ensure air power an equal status

with the land and sea forces and 3. Achieve maximum economy in men, material and money.

"The innumerable conclusions from all war experience," Royal wrote, "is that separation at the top is unnecessary. Intra-service separations all along the line, while costly at the top through the establishment of a single department for our armed forces will permit us to capitalize fully upon what we have learned."

Weather Study Bill Passed

Legislation authorizing the establishment of a network of meteorological stations in the Arctic region to promote the development of Great Circle trans-polar airways was approved by Congress last week and forwarded to the President for signature.

The bill, introduced by Sen. Owen BREWSTER (I., Me.), leaves details of the development to the Air Coordinating Committee of the Commerce Department. Senate Committee Committees estimated that a such meteorological installation would cost about \$200,000.

Conference Postponed

The Joint Air Defense Conference which was to be held Feb. 22-23 at the Mayflower Hotel, Washington, D. C., under the sponsorship of the N.A.A. Joint Airport Users' Conference has been postponed until March 28-29 at the same place.

Report on Bombing of Japan To Be Completed About March 1

Most of staff of 600 making study now are back in Washington to write up data which will figure in battle over unification of armed forces.

Reports on bomb damage to Japan will be completed about March 1, according to unofficial estimates by authority in charge. There will be a number of verbal reports on cities, towns and industries, and some horizontal analyses of the overall Army and the Navy air attack.

The United States Strategic Bombing Survey, headed by Franklin D. Roosevelt, president of Prudential Insurance Co., went to Japan after completing the German study and was on the job there from Sept. 13 to Dec. 1. Most of the staff of about 600 recently returned and is housed in the Air Forces Annex at Geversky Post, Washington, D. C., working on the data.

Significance—President Roosevelt ordered initiation of the survey in a letter to the Secretary of War, Sept. 9, 1944, to obtain data for the forthcoming attack on Japan, and set up an post-war planning and endorsement of the armed forces. On Dec. 18, President Truman extended the survey's mission to cover Japan. A critique was put in charge to assure impartiality.

In addition to asking a record for future military reference, the reports will be used in the Allied control and rehabilitation of Japanese industry. They also will figure in the imminent Washington battle over the proposed unified command of the armed forces and co-equality of the Air Forces. The survey covers effects of atom bombs over Hiroshima and Nagasaki, although these targets had already been investigated by various scientists and bombing experts.

Scope of Survey—The JAS survey is divided into several sections, such as oil and chemicals, over-all effects, transportation, physical damage, aircraft plants, and others. T. P. Wright, Civil Aerodynamics Administrator, is chief of the aeronautical division, and Capt. H. Paul Johnson, U. S. Navy, is deputy chief.

The Navy, which had very little interest in the bombing survey of Europe, had a large share in the air attack on Japan, and therefore is participating extensively in the un-

the Germans—seen as aggressors in their desire to help. In Germany the factories had been damaged by retreating Nazis, by vindictive displaced persons and by Allied bombing fighting through. In Japan there were no such handicaps.

The Japs said they learned more than they ever knew before about their industry as a result of helping the Americans analyze it.

Ryan Announces Creation Of Stainless Steel Division

Ryan Aeroplane Co. has announced creation of the Stainless Steel Manufacturing division, indicating of the company's plan for expansion of its production of precision products.

T. Claude Ryan, president, said the new division, formerly known as the exhaust system division, will operate under the new and more appropriate title due to the broadening of its line of products. In addition to aircraft exhaust systems, parts for jet propulsion engines and allied accessories, which long have been in production, a number of non-aeronautical products of stainless steel which will in the facilities and techniques of this division have been developed.

Clearer Signals Urged

With steps already under way to standardize head signals for airline ground operations, Aero Industries' Underwriters of New York is urging clarification of cockpit signals between captain and crew. Suggestion has been made that phonetic by studied to eliminate repetition of syllables and ambiguity.



HORNET ADAPTED FOR CARRIER USE:

The de Havilland Hornet, rated as "over 470 mph", has been adapted for use aboard aircraft carriers by equipping it with hydraulic-operated folding wings, an "A" shaped arrestor gear and JATO jettison. The Hornet has a 3,000-mi range at 240 mph at 30,000 ft when carrying 920 gal of gasoline, including a 250-gal drop-tank under each wing.



IATCB Aces to Cut Down Number of 'Danger Areas'

The Interdepartmental Air Traffic Control Board has given the Army and Navy until June 1 to justify continuation of 10 danger and restricted areas in the U. S. primarily located in coastal areas.

The number of such areas, which IATCB says changes daily, is being reduced as military operations decrease. Danger areas are those in which aircraft may not be flown without specific authority because of invisible hazards. Certain areas contain visible hazards to be avoided when possible.

Although many of these areas will remain after the reclassification deadline, considerably more navigable air space is expected to become available for civil operations through the Board's action.

Capt. S. Paul Johnston Named IAS Director

Capt. S. Paul Johnston, USNRF, has been appointed Director of the Institute of the Aeronautical Sciences and will take over the post in April.

Widely known in the aviation field, Johnston was an Army cadet pilot in World War I, and after his graduation from the Massachusetts Institute of Technology he spent eight years with the Altimeter Company of America. In 1928 he joined the editorial staff of Aviation magazine, a McGraw-Hill publication and in 1938 became editor.

Coordinated NASA Research—He was appointed Coordinator of Research of the National Advisory Committee for Aeronautics in 1944 and for a time served as executive assistant with the Aircraft Division, WPA. For two years he was Washington manager for the Curtiss-Wright Corp.

He was commissioned a lieutenant and commander in 1945 and was called to active duty in June, 1946. He served with the Naval Air Transport Service in the Pacific as engineering officer and was promoted to the rank of commander in January, 1946, when he became deputy director, aircraft division, U. S. Strategic Bombing Survey. After duty in England, Germany and France he was transferred to missile duties in Tokyo. He was made a captain last December.

Coast Guard Gets B-29's

The Coast Guard is acquiring 16 surplus B-29 Flying Fortresses to use in sea-search rescue work. Six will be stationed on the East Coast, six on the West Coast, and four on the Great Lakes.

Wellwood E. Beale Gets New Position

Beale both engineering and sales at Boeing, Josephs moved on CAF's finance post. Cal to direct Times modification course.

Appointment of Wellwood E. Beall formerly vice-president in charge of engineering for Boeing Aircraft Co., in the new office of vice-president in charge of both engineering and sales highlighted changes in top personnel last week. Directly assisting Beall will be chief engineer Edward C. Wells, Sales Manager Fred B. Collins and Service Manager Robert A. Gossweiler. New assignments will be set up to under the enlarged responsibilities.

Cal N. Henry Josephs (photo) became vice-president in charge of finance and administration for C. H. Clegg & Southern Air Lines. Cal Josephs has been executive assistant to the president and before joining Clegg & Southern was special consultant to the Secretary of War. Prior to that he was with the Army Air Forces at Wright and Patterson Fields and other commands. He is an attorney.

Charles G. Cole has been appointed vice-president of Trans Aircraft Corp., Metropolitan Airport, Van Nuys, Calif., in charge of the modification division. He formerly

was coordinator of sales and service for Douglas Aircraft Co. and also served as maintenance supervisor for Eastern Air Lines. He has been with Pan American Airways, United Air Lines and Western Air Express.

College Flight Training

The University of Kansas City is offering a course in flight training, with instruction open to all students, including veterans. The Kansas City Flying Service and Art College, Inc., are cooperative.

AVIATION CALENDAR

Feb. 16-18: 19th annual insurance conference, Chicago.
Feb. 20-21: National Aircraft Show, Los Angeles, Calif.
Feb. 21-22: French corps accredited, Paris.
Feb. 22-23: Annual general membership meeting, Hotel Statler, New York.
Feb. 23-24: The American Aircraft Engineers Annual Meeting, Hotel Statler, New York. (Meetings are now annual.)
Mar. 1-2: Meeting on application of TACs to aircraft, the design and control needs of aircraft, New York.
March 4-5: General Engineering Technology Meeting, Hotel Statler, New York.
March 10-11: Annual meeting of the American Society of Aircraft Engineers, Hotel Statler, New York.
March 11-12: Meeting on application of TACs, B, C, and D, New York.
March 12-13: Annual meeting of the Manchurian Civil Aviation Association, Hotel Statler, New York.
March 13-14: Annual Technical Conference, Hotel Statler, New York.
March 18-19: Annual meeting of the American Society of Aircraft Engineers, Hotel Statler, New York.
March 20-21: Meeting of the American Society of Aircraft Engineers, Hotel Statler, New York.
March 21-22: Meeting of the American Society of Aircraft Engineers, Hotel Statler, New York.
March 22-23: Meeting of the American Society of Aircraft Engineers, Hotel Statler, New York.
March 23-24: Meeting of the American Society of Aircraft Engineers, Hotel Statler, New York.
March 25-26: Meeting of the American Society of Aircraft Engineers, Hotel Statler, New York.
April 1-2: Annual Technical Conference, Hotel Statler, New York.
April 12-13: Meeting of the American Society of Aircraft Engineers, Hotel Statler, New York.
April 13-14: Meeting of the American Society of Aircraft Engineers, Hotel Statler, New York.
April 15-16: Meeting of the American Society of Aircraft Engineers, Hotel Statler, New York.
April 17-18: Meeting of the American Society of Aircraft Engineers, Hotel Statler, New York.
April 19-20: Meeting of the American Society of Aircraft Engineers, Hotel Statler, New York.
April 21-22: Meeting of the American Society of Aircraft Engineers, Hotel Statler, New York.
April 23-24: Meeting of the American Society of Aircraft Engineers, Hotel Statler, New York.
April 25-26: Meeting of the American Society of Aircraft Engineers, Hotel Statler, New York.
May 1-2: Meeting of the American Society of Aircraft Engineers, Hotel Statler, New York.

PRIVATE FLYING

Campaign Begun to Revitalize NATA; Headquarters Moved to Washington

Plans to raise \$100,000 to hire executive director and launch national promotion drive are outlined at regional meeting in New York and get good reception.

By WILLIAM KROGER

A campaign to revitalized the dormant National Aviation Trade Association was started last week with the removal of headquarters of the association to Washington, D. C. and the holding of a regional NATA meeting in New York City.

Immediate above call for a drive to raise \$100,000 to employ an executive director and staff and launch a public relations and promotional program to put NATA back on its feet as the national spokesman for airport operators and dealers.

Reunion Is Good—The New York meeting of operators in NATA Region I, was the first of seven regional meetings which are being called to explain objectives of the association. Although attendance below expectations due to strike in New York, reception was reported favorable to the proposed financial program.

The entire area would be raised through greater membership, and increased dues. Dues for Class C operators, the smallest, probably will be upped from \$25 to \$50 annually. Class B dues are expected to go to \$168, and Class A to \$350. Associate membership would cost \$20 per year.

NATA Now Handling Work—There was strong feeling, however, that regional committees should be permitted to continue their local activities, with a certain percentage of dues being retained. An encouraging development was the ready reception by Class C members of the increased dues proposal.

Until the overall program has been explained through the other regions, and approval obtained, NATA's affairs in Washington are being handled by the National Aeronautics Association as a three-month contract. Duration of the contract indicates that NATA officials hope results of the campaign will enable the Washington office to be in full swing before the na-

Plan To Work

G. Bernard Fowcock, Jr., Interim Executive Director, who resides in New York, where he moved from Pan-Maryland Airway offices from the Manay Building to the Municipal Airport and found he could now time and money by flying to work.

Fran Fowcock's home is located by the distance is 30 miles. On the other hand, it is only 80 miles from Fowcock's home to the Curtiss-Wright Airport, where as long as his telephone plane and only 10 minutes drive to the Municipal Airport, the entire flying costs are hardly half the auto costs.

Plan Charter Service—Fowcock plans to operate intra-city and charter air service from the Municipal Airport and possibly from Curtiss-Wright as soon as he obtains new planes now on order. (See Page 21)

commanding general, First Air Force. Richard Dugay, chief of security and director, War Assets Control, H. C. Thomas, of the components and parts section of WAC and William Anderson, Pennsylvania director of aviation and president of the National Association of State Aviation Officials.

Graham Heads N. Mex. CAP

Lt. Col. Lewis W. Graham has been appointed commanding officer of the New Mexico wing of the Civil Air Patrol, succeeding Lt. Col. James L. Bassett who has been placed on the CAP retired list.



LUSCOMBE MODEL 10

Believed to be the fastest airplane in its power class, the new experimental Luscombe Model 10, which has completed flight tests near its home plant at Dallas, has a top speed of more than 125 mph. and will cruise at 122 mph. (AVIATION NEWS, Feb. 17)



Kaiser Takes Wheel. Henry Kaiser, West Coast industrialist (right), gets pointers from James Mann, test pilot, in the cabin of new Kaiser-designed personal plane. Kaiser caused a stir in the Oakland, Calif., Airport prior to its successful flight tests. Other tests were suspended for the tests.

its safety, ease of operation. Several of the remaining planes are now in the possession of other aircraft manufacturers for study and studies for new designs and is expected to complete tests by evaluating the operation as when the public has a right to expect at an airport. If the contest proves successful, it will continue as an annual event.

Southern Aircraft Roadable Based on California's Plane

Although Southern Aircraft's slow-speed roadable airplane (AVIATION NEWS, Feb. 4) came as a "post-war" surprise to many, actually it was the result of more than two years of development after its prototype flew over San Diego, Calif., in 1949.

Father of this roadable aircraft is Theodore P. Hall, chief of design and research for Consolidated Vultee and built it in spare time and at his own expense. He began his research as a personal memorandum of facts in his own binder notebook, and later began duplicating it for other pilots.

Through 1950, 1951 and 1952, he made improvements and tested the aircraft at Los Angeles Airport.

► **War Halted Work.** The war halted

work and rules, wind tunnels, testing facilities, fire protection, provision for spectators, cleanliness of restaurants, lounge, barbers, movie equipment, personnel service, efficiency, prompt service and courtesy.

The airports would be visited by volunteer inspectors, and state aviation officials are expected to assist.

► **May Be Continued.** The move is seen as a first attempt to develop civilian aviation for safety and studies for new designs and is expected to complete tests by evaluating the operation as when the public has a right to expect at an airport. If the contest proves successful, it will continue as an annual event.

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► **War Halted Work.** The war halted

work and rules, wind tunnels, testing facilities, fire protection, provision for spectators, cleanliness of restaurants, lounge, barbers, movie equipment, personnel service, efficiency, prompt service and courtesy.

He turned his roadable plane over to the Southern Aircraft Division of Portable Products Corp., Garland, Tex., for final development into the experimental model now flying.

Airfield Information Book Planned For Private Flyers

A private flying information service on airfields and landing strips similar to the Airway Manual now published for airline pilots, is planned by Jeppesen & Co., Denver.

Capt. Erey B. Jeppesen, head of the company and U.S.A. pilot, expects the two-volume manual, which attained a 12,000 circulation during the war, will attain a far wider circulation in its private flying edition. The current manual includes only transport fields, and is kept up to date by loose-leaf sheet additions which are sent out as changes in the fields are made.

He began his manual as a personal memorandum of facts in a notebook, and later began duplicating it for other pilots.

State Air Tolls Planned

Plans for a state-wide toll of 100 private planes are being drafted by the Oklahoma Aviation Association, President Al Gethers announced. The toll, to be held later in the spring, is expected to visit various airports throughout the state to encourage building of additional community airfields in Oklahoma.



Private Roadable Plane. The Southern Aircraft roadable plane shown at the cover of AVIATION NEWS, Feb. 4, goes back to this roadable plane of Theodore P. Hall, chief of design and research at Consolidated Vultee. The Hall roadable, shown here in its ground vehicle version, was road tested and flown in the San Diego area in 1950. War demands on Hall's time caused him to turn the project over to Southern Aircraft for additional development.

Towers Now Using VHF—Great

Change to UNF Will Be Easy On Private Flyers, Wright Asserts

Points out that switchover will be gradual and "painless," eliminating need for immediate expense of replacing present equipment; current system will be continued for several years.

Private flyers will find the forthcoming change from low frequency to high frequency radio for aircraft communications and upgrade a gradual, "relatively painless" and ultimately beneficial affair, according to CAA Administrator T. P. Wright.

An interim period of several years in which both low frequency and VHF equipment may be used simultaneously is necessary for a gradual switch-over, says Wright. VHF equipment by all evidence favors him. Not eventually, of course, communications and signals for radio navigation will be in the VHF band, eliminating the serious static problem.

► **Will Continue Present Services.** The CAA plans to continue to operate its present services using 316 kilocycles for private flyer transmission to CAA ground stations, and 276 kilocycles for traffic control broadcasts to private flyers.

In addition the existing low frequency range will be available to the private flyer's use, since his present receiver covers the 206-606 kilocycle band. Any plane with approved low frequency equipment has all CAA airway aids and communications available now, and they will continue available for private flyers.

► **Change Will Be Complete.** However, CAA's plans do call for eventual complete change to VHF. Already ground transmitters are installed which can be received by planes fitted with VHF equipment, which can only greatly better reception but relieves the 316 kilocycle band in many areas already over-worked.

Radio manufacturers generally are planning to build a five-channel transmitter covering the 311 megacycle band. Only two frequencies will be used at first, 311.9 megacycles for communication from plane to traffic tower and 311.7 megacycles from plane to airway stations. Later, as these channels become crowded, three other channels can be used by the same transmitter, simply by installation of one filter for each channel.

Towers Now Using VHF—Great

Piper Feels Strike

Approximately 1,000 employees of Piper Aircraft Corp., at Lock Haven, Pa., were "furloughed" last week because of lack of materials. Company officials say the strike was not the cause but added that the workers would be needed to resume operations as soon as materials and components again become available.

A study of the last week's operations and the new overtime work plan to be implemented indicates the efficiency record throughout the plant has climbed to 100 percent, with many 350 workers doing all departmental collecting bonus pay.

CAP Will Continue As Auxiliary to AAC

Gen. Carl A. Spaatz, AAC commanding general, last week announced the Civil Air Patrol would continue as an auxiliary to the AAC, even though the federal appropriations to finance CAP would be ended on March 31.

AAC leaders have indicated CAP can continue to be useful as an aid to discharged veterans as well as in supporting AAC under training and other AAC programs. Whether the auxiliary status will continue indefinitely, or only until such time as



LINK BUYS AMPHIBIAN

Edna A. Link, president of Link Aviation Devices, is planning a six weeks' barnstorm trip through Cuba and Mexico next month with his wife, in the new Grumman Widgeon amphibian he purchased recently. Mr. and Mrs. Link are shown above at Tri-Cities Airport, Binghamton, N. Y., with Lee Warren, right, Link's sales representative in New York.

CAP becomes a chartered civilian organization, was not dissolved. Headquarters Moved—Meanwhile, national headquarters of CAP was moved to Washington last week from Ft. Worth, Tex., and was to be established either at the Pentagon or at Bolling Field.

A committee of state CAP representatives met at the Pentagons last week, also, to draft plans for the continuance of the organization as a civilian group. Methods of financing CAP through membership dues or other means is one of the principal priorities.

Pittsburgh-Butler Airport Sold to Flying School

Graham Aviation Flying School Inc., of Pittsburgh, has purchased Pittsburgh-Butler Airport, one of the largest privately-owned fields in Pennsylvania, and plans to develop it into a country club of the air.

The former owner of the field, Transamerica & Western Air Inc., previously had leased the field to the school. William J. Graham, president of the school, and his son have an option on the field for sometime.

Operation Other Fields — Graham and the Scholten Aviation Co. will continue to operate the field. Opening of the field to other operators and sales organizations also is scheduled.

Graham operates airports in Pennsylvania, Georgia and Maryland including commercial fields at Johnstown, Pa., and Cumberland, Md. He operates a string of war service training fields in the South during the war.

Scooccy-Vacuum Presses Airport Development Drive

Second major pushes designed to stimulate development of airports as communities not now having them and to aid in growth of existing airports, are being stimulated by Scooccy-Vacuum Oil Co. Inc., national marketing organization for Standard Oil of New York, Magnolia Petroleum Co., Standard Oil of Kentucky, and General Petroleum Corp. of California.

The first film, "Getting Unloaded," depicts progress in transportation and seeks to encourage greater airport usage and better service to the public. A second film will show dealers how they can give better service to private aircraft. Scooccy-Vacuum also has prepared two manuals showing how to plan airport development.

Briefing For Private Flying

Many flights of private flyers, which were beginning to create wide-spread interest among transportation flyers before the war, are being sensed in many parts of the country as more private planes become available and more private pilots get their tickets. If the interest in personal aviation continues to mount it is likely that local flights for larger than any pre-war will become a usual event in a week-end at the private airport. One of the best known Midwest pre-war breakfast flight organizations was the Michigan Dawn Patrol, which held its first post-war rally at Adrian, Mich., airport on a normal Sunday. Tribute was paid to the late Ken Murray of Adrian, father of the Dawn Patrol, who was killed in a CAP plane crash two years ago.

TRIPLED FLIGHT—The Wisconsin Civil Air Corps recently put a new angle on the conventional breakfast flight when its members arranged a "tripled flight" from Milwaukee to Sturgeon Bay, approximately 140 miles by air, during non-turbulent weather. An airshow was also added to the flyby as the tourists left the Bay, but all planes arrived safely and the 68 visitors participated in a celebratory party after presenting a charter to the Dear County unit of WCAC. The state corps, organized in 1935, now has 17 chapters and more than 3,000 members.

NEBRASKA FLYING FARMERS—A recent Organized Agriculture conference at Lincoln, Neb., brought in a number of flying farmers and ranchers in their own planes. They landed at Union Air Terminal and were provided with transportation to the conference, held on the University of Nebraska campus. Speakers at a special Flying Farmers session included W. T. Piper, Sr., president of Piper Aircraft Corp., John Reynolds, Cass County Flying agricultural agent, Max Kier, member of the State Aerodynamics Committee. A number of farmers recently discharged from military service indicated they intended to take flight instruction under the GI Bill of Rights, if this could be arranged.

GLOBE'S ACE—One of the top fighter pilots of World War II, Maj. Gen. George of Piqua, Ohio, and Maj. John E. Gaudley, Waukesha, Wis., are planning a national air tour flying Globe "Swift" two-place low-wing personal planes, representing Globe Aircraft Corp., Ft. Worth, Texas. Purpose of the tour is to publicize aeronautical activity in Texas.

ONE MONTH TO BUY AND FLY—A Kansas City Times reporter interviewed William A. Goss, local Frankforter, and came to the rather dismaying information that it would cost approximately \$220 a month, after the appropriate plane owner had laid down a \$700 down payment, to buy and fly a Cessna Transair at \$2150 there. Goss's figures were like this: Balance on the airplane, \$1,490 (insurance 10 percent deductible) \$132, carrying charges (6 percent) \$30, totaling \$1,582. To pay it off in a year makes the monthly payments \$345.90. Hangar rent increases this to \$166.50 a month before the pilot can turn the propeller ever. One gallon gasoline and maintenance at \$3 an hour, so that if the pilot flies as much as 20 hours a month, he adds another \$60 a month to get a total monthly cost of \$382.50 while the Cessna, one of the low-priced private planes on the market, is being purchased.

NO AIRPORT ON SWAN ISLAND—Efforts of private flyers and operators in the Portland, Ore., area to have Swan Island, in the Willamette River, retained to use as an airport have been defeated by opposition of the Portland Chamber of Commerce foreign trade and industry committee. The Port of Portland Commission rejected the proposal to restore the island to its pre-war status as an airport. It had been used by oil companies for storing oil out of the city until construction of a larger airport east of the city. The island was leased to the Maritime Commission and was used during the war as a Kaiser Industries shipyard. It is expected to remain an industrial site.

D. C. FLYING—Four hundred and twenty-eight Washington, D. C., residents own their own planes, a recent CAA bulletin shows—an increase of 171 planes over pre-war days. There are 1,146 residents holding pilot licenses, approximately 2,025 students are taking flying lessons at the six principal airports in the area and there are 50 registered flying clubs with a total membership of more than 200. —Alexander McSorley

AIRCRAFT INSTRUMENTS

by GENERAL ELECTRIC



INDICATORS

Magnetic-drag Tachometers

For the measurement of aircraft-engine speed, more than half a million tachometer indicators and generators have been supplied to the armed forces alone by General Electric. (Additional thousands were built to G-E drawings by other manufacturers.) Such demand insures recognition of the following features:

RELIABILITY—More than one out of every thousand instruments shipped from the factory has been returned because of malfunctioning.

ACCURACY—An instrument with a full scale reading of 3,000 rpm indicates within plus or minus 10 rpm in the operating range.

VERSATILITY—These instruments are available in a variety of ratings.

• An explanation of the magnetic-drag principle and its applications is contained in Book 10-1001. Get your copy from the nearest G-E office or write to: Apparatus Department, General Electric Co., Schenectady 5, N. Y.



GENERATORS

OTHER TYPES OF G-E AIRCRAFT INSTRUMENTS

Ammeters and voltmeters

Position-indicating equipment

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Temperature-indicating equipment

Liquid-level-indicating equipment

Remote-indicating compasses

Electric gyroscopes



GENERAL  **ELECTRIC**

PRODUCTION

Priority Given Housing in Britain Hampers Production of Aircraft

Airport development also hindered as former building trade workers are transferred from aviation industry to speed reconstruction of heavily damaged areas.

High priority given to new housing in Great Britain has hampered both the manufacture of new civil aircraft and the preparation of landing fields for civil use. Britain is continuing many wartime controls during the reconstruction period and now that war is no longer has top priority, workers have been drawn from airports and factories to rebuild homes in heavily populated and hard-hit Southern England.

A shortage of design draftsmen and skilled workers has been the greatest industrial bottleneck, according to Sir William Reddick, Airman General of Civil Aviation, who will shortly become secretary general of the International Air Transport Association. Getting new plane through design, he said, "is the devil's own job."

• **Labor Force Skilled**—Illustrating some of the reconstruction trouble of British industry, Sir William said that 365 workers employed on a single new transport plane project were found to have had pre-war experience as carpenters, bricklayers, plasterers or plumbers and were forthwith reassigned to construction work.

In all, he said, there are approximately 500,000 persons employed in British aircraft and engine manufacturing as compared to more than 2,000,000 at the peak of wartime activity.

• **Heavy Project**—Chief—Security of labor also is one of the factors that has made it difficult to put airports into shape for the new overwater transports which already are flying, Sir William said. He was particularly concerned about progress at Heathrow, some 25 miles southwest of London, which is to be the main field for international operations, but said he was confident it would be equal to any airport in the United States.

Work at Heathrow, now used as a trans-Atlantic terminal, is seriously handicapped, he declared. It has

been impossible to get heat for the hangars and labor must be transported from miles away. Some have managed to find lodgings in the nearby resort town, but as soon as the holiday season comes, these landlords evict them in favor of better-paying visitors.

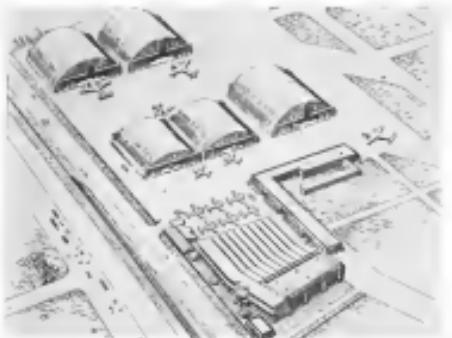
• **SHH Using Crayons**—Meanwhile, he said, British inventiveness has been exercised with such like Crayons which are ideal for marking. Boddy Minard, Crayon Co., has invented hangars and half of an administrative block destroyed. It has only great courage and there is a large depression in the middle of the field, but while "nobody likes it," Sir William declared, it still handles 1,800 flights a week.

WAC Announces Sale Of Two War Plants

Sale of two plants engaged in manufacture of aeronautical production during the war, and the leasing of a third have been announced by the War Assets Corp.

The Chicago facility formerly occupied by the Marquette-McMurry Corp. for the manufacture of aircraft electric control systems has been purchased by the Leaf Building Corp. for the production of chewing gum and candies. Price was \$1,161,460. Reproduction cost of the facility, which was built in 1928, is estimated at \$1,318,884. • **Nash Plant**—The Nash-Kelvinator plant at Lansing, Mich., used during wartime for production of propellers, has been sold to the Mayr-Ward Corp. for \$1,137,526. Original cost was \$2,710,444. The new owners expect to make alterations costing \$148,000.

In one of the few long-term leases yet negotiated for a wartime aircraft plant, the Detroit Facility operated by the Republic Aircraft Products division of Aviation Corp. has been leased for three years to the Federal Motor Truck Co. at an annual rental of \$55,500, which is roughly 8 percent of valuation of \$448,000.



SERVICE CENTER PROJECT

Lockheed Aircraft Corp. will show an inventory of \$11,400,000 when this huge plane service base is completed at Lockheed Air Terminal, Burnside, Calif. Ground has just been broken for the three large hangars which will complete the center. One will be equipped to handle planes larger than the Constitution class, presumably of the size of the Lockheed Constellation, now in the final phase of construction.

Guided Missiles Unit Established By AAF

Indicative of the AAF's continuing and expanding interest in rocket air weapons, the First Experimental Guided Missiles Group has been formed to develop tactics and techniques for the revolutionary weapons.

Under command of Col Harvey T. Axson, former commander of the Seventh Bomb Group in India, the guided missiles work will be undertaken at Eglin Field, Fla., home of the AAF's school of applied tactics. Here, such techniques as "skip-bombing" were tested, and rocket-launching engines, similar to those of the Germans in France, were built and redesigned in order to find a method of attack.

Objectives Outlined — Objectives of the First Experimental Group are development of tactics and techniques of guided missile operations, and testing of missiles originated and developed, development of training requirements and standards, training of personnel, development of personnel and organizational requirements and demonstration of guided missiles in the AAF program.

While one guided missile, the A-9 bomb, was combat service in the war, insufficient data exists for the AAF to decide the various components—rings, equipment, supplies, etc.—of a guided missile force. Thus, formation of the first Ex-



Baz Bomb "Buster" At Eglin Field, Fla., the AAF is experimenting with semi-launched missiles, using this generating plant. Pressure is built up to 1,000 lbs per sq in and a large quick-acting valve is opened for eight-tenths of a second. The stream thus given the V-2 type robot bombs a speed of 240 m.p.h. by the time they reach the end of the 160-ft speed launching ramp.

Link Building Canoe

Link Aviation devices is manufacturing a plastic association canoe which can be pushed or towed by an outboard or steered in the cabin of an airplane.

The portable craft can be carried in two small zipper bags and assembled into a 16-ft canoe in less than ten minutes. It weighs 30 lbs. Much of this weight is due to the use of folded plastic in each of the canoe's ten sections. The plastic is non-absorbent, does not warp, and is impervious to salt water, oil or gasoline.

paramilitary Group may be established as a "pilot model."

Organization and testing of guided missiles will remain under the control of the Guided Missiles Division of the AAF, and the Air Technical Service Command at Wright Field.

Ryan May Reenter Commercial Field

An informal letter sent to stockholders by T. Claude Ryan, president of Ryan Aerotronics Co., gives the first indication that Ryan is planning to reenter the commercial and private airplane manufacturing field.

Ryan's letter and studies of new designs, production and markets for private and commercial planes have been under way since the

war's end. At the same time he added that he did not feel that it was wise to fully reveal the firm's plans in the competitive commercial field at this time.

Continuing Military Work—Ryan is continuing actively in the development of advanced military aircraft types, as she was disclosed. This is evidenced, Ryan pointed out, "by the high employment in the engineering, laboratory and experimental departments where much is new and advanced development work is being carried on." Importance of the activities in new design is illustrated by the nature of the work being done in advanced applications of jet propulsion, supersonic speeds and electronics.

Bendix Buys Beechcraft For Flying Laboratory

Purchase of a Beechcraft 185 two-engine plane as the latest addition to the "flying laboratories" of the Bendix Radio Division has been announced by W. P. Hillard, general manager of the Towson, Md., plant.

The Beechcraft will be based at Bellmore Municipal Airport, Hillard said, and will be used in radio and electronic research. It will carry both experimental and standard Bendix radio equipment, as well as the Pioneer electronic radio.

Special Interior Planned — The new plane will be specially designed as a "flying laboratory" for all phases of radio instruments with antenna work benches and testing equipment built into its interior design. The research activities will be under the direction of Basil Colvin, flight research engineer.

Surface Combustion Corp. Develops New Heater

Development of an aircraft heater which the manufacturer, Surface Combustion Corp., reports is 50% more efficient than the present system in the operation of Douglas DC-3 aircraft has been announced by the company. The unit is called the Jettison.

Surface Combustion says the new heater package adds approximately 35 lbs per payload to the DC-3 since the 350-lb. package complete will however weight 20 lbs less than the system used on planes of this type.

Dimensions — The unit, mounted in a 15-in. by 15-in. by 33-in. fabricated aluminum alloy jacket, can be replaced for servicing and inspection in 15 min.

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normal air transport shown.

Where high intensity lights are installed along a runway, the number of accidents involving aircraft striking the lights is much smaller than compared to the number of fatalities and injuries. Furthermore, the number of such mishaps decreases as the runway width is increased. Here are the figures compiled at four stations:

• Station A—150-ft. runway—one collision in 2,743 landings and takeoffs.

• Station B—150-ft. runway—one collision in 445 landings and takeoffs.

• Station C—300-ft. runway—one collision in 12,855 landings and takeoffs.

• Station D—300-ft. runway—one collision in 15,180 landings and takeoffs.

• **Damage Is Slight.** Damage resulting to aircraft in such accidents varies with the weight. Heavy single engine and multi-engine aircraft sustain little or no damage. Light single-engine planes sustain greater damage but not necessarily severe to cause permanent injuries or loss of one-fourth of a mile.

Navy Cites Value Of Runway Lights

The Navy is convinced of the value of using high intensity lights to aid "all-weather flying" on the basis of 353,537 landings and takeoffs and months of operations in the Adakatsu area.

High intensity lights not only were installed along the approach areas, but also at 300-foot intervals along the full length of the runway on some airports in the United States and on all those in overseas theaters.

• **Risks Are Great.** A Navy report which should be of interest to com-

mercial air transport shows:

Where high intensity lights are installed along a runway, the number of accidents involving aircraft striking the lights is much smaller than compared to the number of fatalities and injuries. Furthermore, the number of such mishaps decreases as the runway width is increased. Here are the figures compiled at four stations:

Commerce Department

Research Unit Set Up

A production research and development division has been established in the Commerce Department to initiate and conduct research and development work on such materials, processes and inventions as will advance the technological productivity of the nation.

The new unit will carry out generally the functions of the former Office of Production Research and Development transferred to the Commerce Department from the Civilian Production Administration.

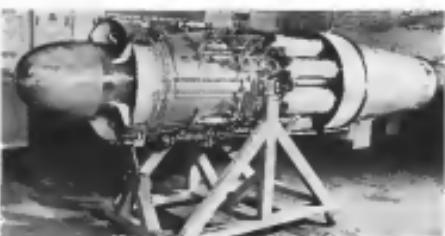
• **Aviation Outlined As Goal.** By terms of the executive order establishing the division will, among other activities, arrange for the development of maintenance instruments and components required from the National Inventors Council, other agencies and individuals. The division also is charged with sponsoring the coordination and use of technical knowledge, patented or unpatented, wherever such use would promote technological production.

Kiddie Smoke Detector Uses Photo-Electric Cell

A smoke detector for airplanes cargo space which works on a standard 12-, 16-, 24- or 28-volt current and uses a photo-electric cell has been developed by Walter Kiddie & Co. engineers.

Detection of smoke by photo-electric means requires an instrument which functions on slight changes in illumination on a photo-electric cell, caused by the presence of smoke. These changes in illumination ordinarily are as slight as to require extreme sensitivity in the detecting instrument, although this sensitivity does not necessarily mean extreme delicacy.

• **Principle Explained.**—The Kiddie detector has a light directed on a photo-electric cell with clear air between the cell and the light source. The introduction of smoke into the light path reduces the light intensity reaching the cell and unbalances the electric circuit, setting off either audible or visible alarm.



New GE Jet Power Plant: General Electric's newly-developed small, fast turbojet engine, the TG-180, is designed for sustained high-speed, long-range aircraft.

THE SKYPOWER PROPELLER IS THE GEAR SHOT OF YOUR PLANE! NOTE THESE ADVANTAGES:

- **SKYPOWER PROPELLER** operates hydraulically from the engine-driven oil pump. Operation is automatic or on opening prop. in pitch or angle of attack to go fast.
- **POSITIVE** hydraulic control of Skypower Propeller in either position.
- **ESPECIALLY DESIGNED** maximum pitch, blades for greatest efficiency.
- **FOLD DOWN** control as propeller pitch is reduced to 0 or more.
- **HYDRAULIC** motor is simple and reliable.
- **SIMPLE DESIGN** results in light weight.

PERSONNEL

Chicago & Southern Names Maurer General Counsel

Richard S. Maurer (photo) has been appointed general counsel of Chicago & Southern Airlines, Inc., by President H. R. Bolander, Jr., vice-president and general counsel, who resigned to join Delta Air Lines as an administrative assistant.

He had formerly and assistant general counsel. Prior to that he served with the Civil Aeronautics Board.

Bolander succeeded James A. Collier, who now is an American Airlines vice-president.

J. A. Wilson has been appointed general manager of the Styrene division of United Aircraft Products, Inc. He formerly was general manager of the Curtiss-Wright Airplane division plant in Columbus, Ohio, and held various executive posts in the Curtiss-Wright Corp. in Buffalo.

Maurice Ferrier has been named manager of the eastern division of Fairchild Aerial Surveys, Inc., after three years as chief of the photogrammetric division of the Army Map Service. He succeeds Max A. Phillips, who has gone into Fairchild's design service.

Ralph Greenwood has been appointed supervisor of the propeller department of the Hartford branch of Pacific Aviation Corp. Greenwood was formerly manager of the Hartford propeller Co. and previously was supervisor of the propeller department of Douglas Aircraft Co's overseas operation in Africa.

K. F. Vandervelp (photo) has joined Kellott Aircraft Corp. as works manager in charge of all production activities. Vandervelp has been with Curtiss-Wright as executive engineer, general manager of the Buffalo engine plants and factory manager of the Curtiss-Wright plant. He also has been controller and general manager of Bellanca Aircraft Corp. and continues as a member of the board of directors of Bellanca.

Four former regional managers of the CAA have returned to their jobs, now called regional administrators. Col. George W. West, a head of the third region at Chicago, Col. Joseph

C. H. Kibbes has been appointed assistant manager of American Airlines. Kibbes has been in the transportation field since 1933. Maj. Thomas L. Martin has returned to American to resume work in the agency department.

The board of directors of Blackburn Aircraft Ltd., England, have appointed **W. B. Ferrie** as technical director. Ferrie has been a director of the Royal Aircraft Establishment at Farnborough during World War II, he was in charge of aerodynamics design and experimental at the Royal Aircraft Factory. In 1938 he joined **Max F. G. Green** at Armstrong Whitworth Aircraft. He was one of the early converts to the jet engine, and jet propulsion. After 12 years as a director of Blackburn, **E. Hadlow** has retired. The present secretary **A. F. Asplund** will replace him on the board.

Charles E. Basye (photo) has been appointed system supervisor at reservations of Northwest Airlines. He had been staff assistant to the general supervisor. His new work will be an all problems of the system of reservations. **Carl A. Nelson** has been appointed chief auditor of Northwest, succeeding **J. F. Rawlinson**, who has resigned to enter the automobile business. Nelson formerly was with an accounting and auditing firm.

Eight Veterans Return To Positions With CAA

Eight veterans have returned to the Civil Aeronautics Administration.

Col. Howard F. Knapp, formerly regional manager at Barge, returns to his assignment and will serve as special consultant to the Administrator. **Col. Russell W. Bolberg**, formerly chief of air carrier inspection in the fifth CAA region, rejoins CAA as chief of flight operations service. **Col. John Marshall** has been named coordinator of safety regulation. He was a flight examiner. **Col. Bennett H. Gralla**, director of the CAA's administration center at Houston, has been serving as a manager.

Four former regional managers of the CAA have returned to their jobs, now called regional administrators. **Col. George W. West**, a head of the third region at Chicago, **Col. Joseph**



CAA OFFICIAL RESIGNS

Dr. Edgar Fuller, who has resigned as acting chief of the aviation education division of the Civil Aeronautics Administration, to become state commissioner of education for New Hampshire. In 1944 Dr. Fuller won the Frank G. Brueger Trophy, awarded for outstanding contributions to the education of youth in aviation.

S. Merrill is with the ninth region at Sioux City, **Lt. Col. Robert D. Edinger** is manager of the seventh region at Denver, **Col. Leonard M. Williams** took up his post at the fifth region in Kansas City.

Col. Glynnis M. James is joining other CAA representatives in Germany to assist in reorganizing aviation flying.

Marvin J. Parks (photo) has been named export manager for Fairchild Engine & Airplane Corp., with headquarters in Washington. Parks has been an engineer on the C-47 Project at the Fairchild Aircraft division in St. Paul. He has served with Pan American Airways, Paraguay and American Airways. In 1939 he was chief engineer of the Loeb plant of Curtiss-Wright Corp.

Two other native pilots with foreign aviation experience will assist Parks as export representatives. They are **Alfredo de los Rios**, founder and present chairman of the Inter-American Aviation Council, and **A. Horacio Grupi**, who was with Curtiss-Wright.

Glennon E. McGregor, recently with the NCAR, has been appointed general traffic manager of Trans-Canada Airlines.



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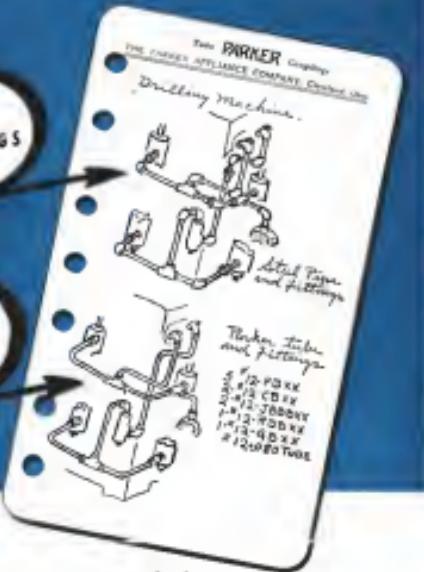
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22 PIPE FITTINGS
OLD METHOD

11 PARKER TUBE COUPLINGS
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FLUID POWER PRODUCTS FOR ALL INDUSTRY

SPECIAL AIR SERVICES

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NON-SCHEDULED

INTRASTATE

Revision of Proposed Part 42 For Further Study Is Indicated

Refaft either will be recirculated or made subject of conference with industry representatives next month but CAB is firm in plans to proceed with regulation.

With CAB's Safety Bureau still coordinating industry comments on the projected Federal safety regulation of non-scheduled air carriers—Part 42 of the Civil Air Regulations—proposals are that a modified draft either will be resubmitted or made the subject of a conference with the industry early next month.

While the draft will eliminate some features considered burdensome by operators (Aviation News, Aug. 28, 1947), non-scheduled carriers are likely to remain virtually in their legal fight to shake off economic regulation.

Board Firms in Plan.—As previously reported in Aviation News, CAB is firmly resolved to proceed with regulation of non-scheduled carriers under what it believes is the intent of the Act of 1932. Under consideration has been two-fold control: economic and safety. Public hearings on lifting the exemption order and instituting economic regulation were held two months ago. Safety regulation was not considered at that time.

The Board considers the Part 42 draft only one aspect of the two-fold concept, that of safety, with a complete, separate, and independent economic regulation. However, Part 42, as written, would eliminate certain types of services and increase operating costs on others. Operators contend, therefore, that it is, in effect, economic regulation, and much of their comment stressed this fact.

Single Engine Rating Scrutinized.—Most of the 118 replies received at CAB by the Jan. 21 deadline were from operators who asserted the prohibition against use of single-engine aircraft at night or under instrument flight rules, effective Dec. 31, 1947, would put them out of business.

Maxwell W. Ballou, vice-president of Spartan Aircraft Co. which, in addition to building a single-en-

gine his own plane for pleasure, was asserted. Another of the questions—whether a carrier should be required to have its own ground equipment—was raised. It was almost unanimously opposed on the basis of unnecessary expense in duplication of existing set-ups.

Joseph T. Gourdin, responding on behalf of the Personal Aircraft Council, expressed opposition to any type of regulation, stating: "In our conviction that non-scheduled air carrier operations must not be stifled in any way, this whole field is open and must be given every opportunity to develop." Regulation, he added, is not needed and is not in the public interest.

Non-Capacity Flows ATA.—While replies received to the Board's questionnaire covered a cross-section of the industry, even including manufacturers of parts and service firms who may not be in revenue operations, the Air Transport Association did not submit comments. ATA has been among the proponents of economic regulation for non-scheduled carriers.

ATA Hails Carbs.—The split on this question was along expected lines, with operators of multi-engine equipment in favor of Part 42 in its present form. While the secretary of the Aerospace Trade Assoc., stated that "thus is not the time to freeze earnings into the air carrier business at the level of \$5,000,000 or \$60,000,000" corporations, which alone may be capable of purchasing multi-engine equipment.

Pilot Time Plan ATA.—Likewise readily condemned was the suggestion that pilot time in other than a commercial operation be counted against the allowable pilot hours. This would mitigate against a pilot's

Division On 'Chutes

Answers to the questions, submitted in the proposed Part 42, regarding the carrying of passengers in non-scheduled aircraft conducted in single-engine aircraft, surprised both industry and CAB's Safety Bureau. There was practically an even split among the 118 replies received.

While some among the 57 who responded as favorable were not entirely in favor of the idea, the use of the marker of parachutes deserved consideration. One slightly less concordant was that the idea had merit not only with respect to single-engine aircraft, but to multi-engine planes during instrument flight conditions, not only for non-scheduled operations, but for scheduled carriers as well.

Incorporated by the four carriers,

Northern Consolidated seeks to integrate service from Anchorage and Fairbanks to interior points. Ray J. Peacock, co-partner of Ray Peacock Flying Service, is president.

One Aviation Reorganized.

Otto Airlines, Inc., Newark Airport, has acquired all assets of Otto Aviation Corp.'s airline division and will continue its charter and contract flying, according to Brewster E. Otto, president. Director of the new company, which has applications pending for routes radiating from Newark and New York to points in Eastern Pennsylvania, Southern New Jersey and New York state, include Bill Robb, Wilson aviation consultant and former New Jersey Aviation Director, and Eugene L. Vidal, president of Vidal Research Corp.



Am. Airlines now carries passengers from all cities and airports to and from all cities and airports in the U.S. and Canada. The cities to be served by the new service are: Boston, Chicago, Cleveland, Detroit, Fort Worth, Houston, Kansas City, Los Angeles, Milwaukee, New York, Philadelphia, St. Louis, San Francisco, Seattle, and Washington.

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NEW CHARTER FIELD

This advertisement is appearing in Los Angeles area newspapers. Several operators of charter transports have talked about manufacturing with Bellanca, but the one believed to be the first time this has occurred has acted. Paul Williams of Donstan Air Express approached Pierce Brothers Mortuaries with the idea. DAE has confided with Pierce to air ship a casketed body, with a 700-lb. weight limit, from Los Angeles to Dallas for \$125, to Kansas City for \$145, to New York City for \$285. Special railway express arrangements are made to transport to destinations beyond DAE's revisional points.

Other State Codes Studied by Arizona Commission

Arizona Corporation Commission is reviewing codes of other states as a code for proposed legislation to strengthen its supervision and regulation of intrastate air carriers. At present only one air carrier is derived from an old law passed before aviation's development.

The contemplated state commercial aviation code would broaden the commission's authority over air carriers by setting up standards and specific regulations governing such factors as safety, description of routes, fares and rates and procedures for obtaining operating certificates, according to Wilton T. Wright, ACC chairman.

Maryland Line Planning to Use Amphibians

Permit to use amphibian aircraft until suitable airports are available in towns he franchises to serve has been requested of the Maryland Public Service Commission by G. Howard Penwick, Jr., president of Pan-Maryland Airways.

Penwick told the commission that the backlog for construction of airports at most of the small towns he is authorized to serve on intrastate air routes is "presently 3 years." On the other hand, he pointed out, at least two-thirds of the towns are as waterways where amphibians could operate frequently into the business center of the community. Service to these ports probably could be opened this spring, he said.

Pan-Maryland is franchised to serve Annapolis, Easton, Cambridge, Chestertown, Crisfield, Cambridge, College Park (near Washington, D.C.), Brandywine, Elkhorn, Frederick, and Westminster. Penwick said he had ordered 20 Republic Seafliers and expected deliveries to start this spring. He indicated he was not abandoning his intention of using some Bellanca Cruisers for land-based operation.

FIVE MORE LINES TO SEEK ROUTES IN SOUTHWEST

Arizona-New Mexico area chose prehearing conference disclosed intention of five additional carriers to make route applications and a request by Braniff Airways for the consolidation of the Amarillo-Las

Angeles portion of its transcontinental application in that proceeding or one held concurrently.

Western Air Lines, Southwest Airways Co., Chicago Airlines, American Airways and Texas-New Mexico Airlines were to file in order by Feb. 19.

Planning of the case, last assigned of the regional franchise proceedings, was tentatively set for June, possibly in Albuquerque or Phoenix, in accordance with participants' requests.

Use of Large Cargo Gliders in Canada Is Predicted

Large freight planes towing load gliders which will be released over their destinations are anticipated in the Canadian north country within a year or two, as the opinion of C. H. "French" Decker, president of the Air Industries and Transport Association of Canada.

The two planes would land at terminal communities which have airports of sufficient size to accommodate large aircraft. The gliders would be brought down at small clearings in remote communities.

LOUISIANA SERVICE RENEWED

Regular intrastate service between New Orleans and Monroe, La., has been resumed by Southern Airlines, a division of Southern Transoceanic Flights, was discontinued in early January because of poor conditions at Monroe. Steps at Alexandria and Baton Rouge are also made. Commuter transports are used.

'Flying Showroom' Tour Scheduled

A new conception of aviation as an export marketing aid will be put into action by Trans-Caribbean Air Cargo Lines Inc., a subsidiary of Newark Airport cargo plane manufacturer. The company will operate a DC-3 equipped with cameras, cameras, samples and displays through 11 Latin American countries stopping at 18 major cities.

The "flying showroom" in addition to crew will be mounted by trained demonstrators speaking both Spanish and Portuguese. The plane will be specially-modified with 200 cu. ft. of cargo space, 10 ft. long and 8 ft. high. Each demonstrator is assigned a booth for his products.

The display can be augmented with colored slides using projectors furnished by Trans-Caribbean.

► AIR BOARDS READING — A2-28

islands have been booked to the initial flight which will begin and terminate at Newark Airport during March 1946. It is estimated that the enterprise is well along, the company has signed a minimum of four similar flights this year.

Products to be carried on the first run include jewelry, paper, plastic products, sun glasses, perfumes, chemicals, hardware, glass, cotton, and other items.

► AIR BOARDS READING — The airline is establishing a subsidiary, Trans-Caribbean Air Cargo Products Inc., to act as distributor and agent for products carried in the "flying showroom." This organization, through branch offices, will handle advance arrangements for the plane's visits.

1-20-46, FLASH! UNITED BUYS FLEET OF MARTIN TWIN-ENGINED TRANSPORTS



5 GREAT AIRLINES BUY THE MARTIN 2-0-2

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AVIATION NEWS • February 18, 1946

FINANCIAL

Convair Purchase of ACF-Brill Keynotes Trend to Diversification

\$7,500,000 deal acquiring transit equipment company cannot be held step in general effort to utilize surplus production facilities by entering non-aviation fields.

Aircraft builders are rapidly diversifying their activities by entering non-aviation pursuits as a sharp curtailment of military orders confronts them with the problem of utilizing surplus production facilities. As the aeronautical cognoscenti have comfortable bank balances, it has not been difficult to buy into other enterprises.

Perhaps the boldest step yet in this direction was taken recently by Convair, the Valley Aircraft Corp. in financial combination at \$8,000,000 in seven years by Convair's ACF-Brill Motors Co. Earlier this year, Convair also entered into a contract with its parent, Aviation Corp., which owns almost 30 percent of its stock, to produce durable consumer goods such as kitchen slaves and farm implements.

Details of Acquisition—In the ACF-Brill acquisition, Convair initially will own 445,339 of the 582,278 shares and 140,654 of the 282,944 outstanding warrants. Each warrant carries the right to purchase one common share at \$12.50 until Jan. 1, 1950, and at \$15 until Jan. 1, 1956.

ACF-Brill, together with its wholly-owned subsidiary, Hill-Scott Motor Car Co., is presently engaged in the production of motorized transit equipment and vehicles for buses, trucks, marine and other purposes. The company is currently reported to have a backlog of some \$50,000,000 in orders.

Reorganization in 1945—The enterprise was a subsidiary of the American Car & Foundry Co., freight car builders. The Brill properties were reorganized in July, 1945, after a turbulent corporate existence. Prior to the war, the company operated at deficit levels. Minority stockholders, with regularity, and ACF for accounting, chose management. The parent, in turn, maintained that the company was in serious financial straits, requiring frequent transfusions.

War earnings helped the mother company through and permitted the reorganization of the capital structure that followed in 1944. In the reorganization, \$4,500,000 in 6 percent income debentures also were issued, of which almost \$3,000,000 were recovered by ACF in settlement of old claims. It is not unlikely that ACF is relieved to be free of control and management of this property.

May Expand Holdings

It is possible that Convair will expand its holdings in ACF-Brill.

Aerospace Corp. financial policy appears to favor owning as much of the equity of controlled subsidiaries as possible. This was clearly evident in the case of American Central Manufacturing Corp. now 61 percent owned by Aviation Corp. It is clear in the concurrent purchases of the common stock of the Crosley Corp. When Aviation Corp. acquired control of Crosley in August, 1945, it obtained approximately 450,000 shares. These holdings have now been increased to 663,838 out of the total 845,000 shares outstanding for Crosley.

Purchased Implement Firm—Last October, Aviation Corp. purchased control of New Idea, Inc., manufacturers of farm machinery and implements. Convair's Nashville plant is in the process of being converted to manufacture New Idea's electric ranges for Aviation Corp., which will handle distribution and sales. Later, this plant will produce tractors for Aviation Corp., which will handle distribution and sales.

With the Civil Aeronautics Board decree ordering Aviation Corp. to sell the bulk of its American Airlines holdings and with Convair entering extensive non-airline aviation, it is clear that Aviation Corp.'s primary interest will no longer be in the aeronautical industry. It is ironic to note that the predecessor unit of Holdings Corp. in 1938 sold its entire holdings of Bantam Home Appliances, Inc., for 15,000 shares of founders' stock of

the New York Shipbuilding Corp.

Lockheed

Lockheed Aircraft Corp. is feeling its way towards diversification very slowly. The company recently purchased the 1946 capital stock of Pacific Engineering Corp. of Los Angeles and proposes to merge this property with the Argonautics Co., recently formed by Lockheed to make ground handling equipment. During 1945 and 1946, Lockheed acquired control of Pacific Finance Corp.

Curtiss-Wright—Curtiss-Wright Corp. has also been and continues to be in the non-aircraft field. A number of aircraft spin-offs it acquired the L. G. S. Spruce Clutch Co. of Indianapolis and subsequently the Marquette Metal Products Co. of Cleveland.

MacMinn

Glenn L. Martin Co. is also working for non-aviation markets. The company has recently announced that it will construct a \$1,500,000 building in Cleveland to manufacture its new estate plates, Marquette resin, for commercial purposes. The company has formed a plastics and chemicals division and presumably will venture further into the field. The plant will manufacture only new materials, not manufacture old plants products.

Speed-Boat—Speed-Boat Corp., in association with Polar Marine, Inc. (formerly Division Dredging Machines, Inc.), is proceeding with plans to construct a new type metal and plastic boat, and is investigating sustainable production (AVIATION NEWS, Feb. 11).

Gruenauer—Gruenauer Aircraft Engineering Corp. last year demonstrated a new type of airplane engine. It is too early to determine the extent of this company's participation in the manufacture of that product. Unlike most of the aircraft builders, Gruenauer did not expand rapidly to meet war production schedules and does not have the extensive large production facilities to contend with.

Not all aircraft builders, however, are attempting to diversify—yet. United Aircraft Corp., Boeing Airplane Co. and Douglas Aircraft Co. are examples of those which that far have shown no signs of straying from the aeronautics field.

Big Losses—Some observers believe that diversification in aircraft fields will not automatically assure profitable operations. In fact, certain projected activities may incur heavy deficits and subsequently liquidated at considerable loss to the stockholders. In the last analysis, the success of any surviving aircraft company will be dependent on the quality of its management.



He's shaking hands with 90° below

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The idea in the planes above is using airplane hoses in the cross-cold chamber. These hoses have to be flexible in temperatures below zero.

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rubberization known that it can withstand heat and stay flexible, there at little to fear from extremes.

The war proved how necessary this kind of testing is. Gruenauer temperatures of 65° below were encountered in Alaska and Siberia. And at high altitudes, even lower temperatures were recorded.

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This new B. F. Goodrich cold room

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TRANSPORT

Ratification of Bermuda Agreement
Breaks World Transport Bottleneck

U. S. representatives satisfied with results of conference which focus traffic to and through U. S. and Britain, multilateral agreements along same lines seem possible through PIACAO.

With the possible exception of Pan American World Airways U. S. government and airline representatives returned from Bermuda last week highly satisfied with the results of their four weeks of work at the Anglo-American Civil Aviation Conference.

Following ratification of the Bermuda agreements by Washington and London, international air traffic between and through the two countries and their possessions now will move without frequency limitation, with virtually unlimited rights to Fifth Freedom traffic and with rates subject, for the next year, to regulation by the International Air Traffic Association under the eye and veto power of both governments.

Breaks Bottleneck — In addition, the agreement breaks the bottleneck that has kept American carriers from completing their route schedules in Europe and the Near East.

The U. S. now confidently expects that bilateral agreements on the same liberal terms as the Bermuda accord can be reached with such countries as India, Egypt and Greece. These are key points in U. S. international routes which have been in the British orbit and with whom no satisfactory agreements have as yet been reached.

Multilateral Agreement — Soon there will be a general meeting of the Pan American International Civil Aviation Organization at Montreal which will be able to draft a multilateral agreement along the Bermuda lines that will be acceptable to most nations. This may greatly simplify conclusion of the framework of international agreement on which the air transport system depends.

The route structure agreed on by the two countries is the first general designation that the Fifth Freedom works both ways. U. S. lines will have the right to pick up traffic in Britain for a large num-

ber of flights on the Pan American continent for these third countries which almost entirely Caribbean and Latin American nations which in turn are non-members.

BOAC, for instance, will be able to take on American passengers at New York for Mexico City, Cuba, Panama, Colombia, Ecuador, Peru and Chile. Rights accorded in BOAC on bases through the U. S. from the Caribbean to Montreal, or across the U. S. to Hong Kong and Singapore, are not expected to conflict at much with U. S. lines.

► **Mitigating Factors Cited** — Mitigating factors are the probable lag in activating these BOAC routes, and the agreement's provisions that traffic picked up in this way under the Fifth Freedom must be immediately on to the long-haul payload from the country of origin to the final destination.

Dominant critics of the agreements so far, however, have centered on the rate regulation features, rather than on the route structure. Sen. Burton K. Wheeler and Pat McCarran, the latter a leading advocate of the single U. S. flag line proposed by Pan American, have questioned the authority of the State Department and the Civil Aeronautics Board to ratify the Bermuda accord as an executive agreement. Wheeler also has criticized the procedure for rate fixing through PIACAO as an international cartel.

► **Authorities Confused** — State Department legal authorities, however, are confident that their agency has all of the authority necessary while the CAB is expected to issue a formal ruling confirming the in-



ATA CHIEFS SEE LANGLEY LABORATORY:

Three Air Transport Association executives were among the group who visited the MACA laboratory at Langley Field, Va., when it was opened to public inspection, recently for the first time since before the war. (See Page 7.) In the picture (left to right) are Henry J. E. Real, engineer in charge of the laboratory, Robert Basupack, executive vice-president, Ewery S. Land, president, and Milton W. Arnold, operations vice-president, of ATA, and John F. Vinter, MACA secretary.

Treaty Bill Offered

As a sequel to his Senate speech, in which the author of the conference agreement insisted at the Anglo-American conference in Bermuda, Senator McCarran has introduced legislation (S 1814) requiring all international air transport agreements to take the form of a treaty.

Former statement at Bermuda that has the legal power to approve interairline agreements on rates and, by approving, exempt them from the operations of the anti-trust laws.

Second, that, however, the Bermuda Agreement stipulates that CAB will not discriminate, as it has before, for clear and direct authority to fix rates. Each government reserves the right to assert final judgment on the fairness of rates and to refuse to abide by the agreements of the currency IATA conferences. Until CAB requires direct rate fixing powers, such authority can, in the case of a rate dispute, prevent the raising of services at the rate complained of.

After they have been acquired, however, a proposed new rate will go into effect automatically at the end of a 30-day notice period,

pending settlement of disagreement by consultation between governments or by PICAO arbitration.

The latter clause places greater authority than any dispute over points covered by the Bermuda agreement, shall be referred to PICAO for an advisory report, somewhat strengthens that body's position in contentious matters. Failure of US and Great Britain to agree at the Chicago Conference which created PICAO left it with virtually no economic powers.

3 Lines Support CAB—U. S. North Atlantic carriers—Pan American, American Overseas, and TWA—as well as the State Department have agreed to support the request of CAB for direct statutory power to regulate the rates charged by international U. S. flag carriers.

Terrell U. Brinkley, vice-president of American Overseas and adviser to the U. S. delegation at Bermuda, said in his return to that country that "no credit is received in this agreement at all. You can't hold prices up in a public utility when the government is fixing rates."

Will Propose Lower Rates—Goldschwater and his company will propose a rate substantially lower than the present \$613 to London at the forthcoming meeting of the IATA rate conference and will ask IATA to take on file a view of reducing it further later.

New Device Permits Automatic Landings

Minneapolis-Honeywell announces overhauled main of all-weather flying conference.

Nature of the instrument landing system that may be used commercially for the next few years was indicated in the announcement last week of a completely automatic landing device that in its application overshadowed the week-long conference on all-weather flying and landing that had just been concluded.

Minneapolis-Honeywell Regulator Co., which developed the automatic blind landing device in cooperation with CAB, did not give an exposition of its operation at the conference, although the firm was represented at the sessions. The meeting was sponsored by the AAF (Aviation News, Feb. 11).

Concert Tube Instrument—The device couples the company's electronic "Airspeed" with a glide path indicator and locator receiver tuned in the standard 803-81 approach system being utilized by CAB. The panel does not touch the controls. CAB reports many successful completely automatic landings at its station at Indianapolis. The device also fitted well in Army transports, it is reported.

Because of this, informed opinion is that CAB will not change plans to build its instrument approach system around 803-81, despite thorough tests being made at Indianapolis with the Ground Control Approach all-weather system. The instrument could be said to be a major factor in the alleged shortcomings of 803-81.

Conference Hears 15 Reports—At AAF's conference, emphasis was on adaptations of SES-31, GCA, the IFF (Identification, Friend or Foe) instrument used during the war, and LORAN (Long-Range Navigation). Fidens companies presented outlines of their systems, which ranged from a simplified "block-to-block" set-up, based on railway procedures suggested by General Railway Signal Co., to refinements in switching 803-81 to VHF.

As a result of the discussion, a committee to be headed by Col. Ben S. Kelley of Wright Field will recommend navigation and landing systems for tests on a proposed AAF experimental all-weather "airline." The test will neither be competitive nor the route of the line had been decided.

THE COUNTERPOINT OF DEPENDABILITY IN ANY ELECTRONIC EQUIPMENT



... FROM A TO Z IN PLASTICS



LANCASTER INTERIOR:

Photo shows the interior of one of the converted Lancaster bombers being used by Trans-Canada Air Lines as its first-service service from Montreal to Prestwick, Scotland. The cabin has fluorescent lighting, electrically heated kitchens, and steward-passenger service. Some of the passengers carry eight passengers, others ten.

From raw chemical to finished shape—plastics are a product of time. No wonder then that plastics and electronics—the new items of tomorrow—have already joined forces. Manufacturers of widely divergent products had a common goal of profit through the use of electronic heat. The biggest in electronic heating equipment are those which utilize Eimac electronic vacuum tubes. Why? Because each equipment enjoys a double guarantee of dependability, one from the equipment maker and the second from Eimac, backed by more than a decade of continuous experience in making electronic vacuum tubes.

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ALPA Reported Forced to Deal With Airline Negotiating Group

All 15 of affiliated carriers said to be in on National Mediation Board sessions over continued power of Behrcke.

By BLAINE STUBBLEFIELD

Reports from meetings at the National (Railway) Mediation Board are that the Air Line Pilots Association has been compelled to renege and deal with the airlines' wage committee over ALPA's demand for more than 26% pilot pay increase on 4-engined equipment.

These reports say that all 13 carriers in the 4-engined program are now in the negotiations over the continuing protest of David G. Behrcke, ALPA president, who has threatened a strike deal with the committee at a time and not with the committee at all.

FCAB Agrees—Agreement—Approved by CAB of the softmax amendment creating the wage negotiating committee merely releases the operators from liability under the anti-trust laws. Since the Justice Department already had stated it had no objection to the agreement, CAB's approval is of no legal import-



RAINBOW CAPACITY INCREASED BY SIX SEATS

This cutaway drawing of the proposed Republic Rainbow shows reasons of necessity to increase passenger capacity from 46 to 52. In the original arrangement (AVIATION NEWS, Sept. 2, 1943), eight seats faced backwards and the rooms between the wings were used as a lounge. The military (XP-12) prototype has three, and the commercial version is to be ready—unless the number is 54. Pan American wants it to go in at a cost of \$1,250,000 each. Republic has promised the airlines that the Northwest transport (RC-2) will have at least 688 cubic feet space. It will cruise at 300 mph at 40,000 ft, with a range over 4,100 miles. The transport will seat 26 in 12 ft 2 in. long—5 ft longer than the XP-12 (Photo on Page 31).

Families provided on the scheduled lines are in most cases superior, which should make the pilots' jobs easier.

Rating Near—In writing the order under Title 4 of the law, excepting non-scheduled operations from certain economic and safety controls, the Board specifically indicated that such exemptions did not apply to the fiber personnel of the Act—unless at such previous, new, or other non-scheduled operations. CAB legal counsel said CAB currently sees no reason why compensation for pilot pay and other labor disputes as the non-scheduled lines shall be referred in the Mediation Board.

Proposed Part 42 of the Civil Air Regulations would make the requirements of pilot qualifications on non-scheduled lines CAB sources recently agreed that the public is entitled to the additional safety that would result. (See Page 35.) Qualifications still would not be as high as on the certificate lines however.

The Mediation Board, the airlines committee and the pilots are holding the first light on their negotiations on the theory that public discussion jeopardizes the chances of a successful conclusion. But persons on the inside say the light is a bitter one.

Michigan Cities Seek Better Air Service

Bullock Michigan communities seeking to get the state air transportation "out of the rear line stage" plan to file with CAB a petition for air mail service. All are members of the Michigan Air Transport Association.

City Manager Carl H. Peterson of Saginaw, a community of 100,000, says it is time serving Michigan have more air facilities where they want to go. He uses definite need in a route from Chicago to Northern Michigan. (PCA has not been to AM 41 south from Flint since winter service pattern took effect in 1943.)

Outlines—Concerns—He said PCA has promised recognition of service in the Saginaw Bay City and Midland, in city area "in or shortly after February" but the airline officials failed to appear for a meeting recently scheduled with city officials from that area.

Peterson has been authorized by MATA, a board of directors to obtain the services of Col. Floyd E. Evans, director of the State Department of Aeronautics to assist the Association in working out a statewide plan for air service.

Airport News Highlighted by Start Of ATA Survey of Operations

Baltimore plans new municipal airport meet opposition from property owners; Detroit base at Windsor, Ont., favored with Willow Run as interim terminal.

By MERLIN MICKLE

The study of airport terminal operations throughout the country authorized by the Air Transport Association—one of the major developments in recent airport news—started recently at Memphis, Tenn., less than three weeks after the survey was approved by ATA directors.

Joseph D. McGaugh, former New York City engineer who is directing the survey, and other airport specialists associated with him called with Memphis city officials and airline executives and investigated local airport facilities. Memphis terminal officials, McGaugh said, are typical of other airports because it is an important point north-south as well as east-west flying.

Other Cities To Be Studied—Other cities to be studied are Albany, Georgia, Berlin, Chicago, Dallas, Detroit, Kansas City, Miami, Peoria, San Francisco and Toledo.

Selected for their variety, plus the fact that they are served by one or more of most of the major airlines, airports at these places will be the source of information on present activities and present and future costs and revenues, need for expansion and equipment investment and prospects for local government financing and the possibility of moving through a combined operation by an airline terminal corporation. Recommendations at the latter point probably will be months in coming, and will depend on the outcome of the first two.

Many Problems Arise—While the survey is progressing, the Association is working on various parts of the Nation, with extensive airport growing pains with differing degrees of severity.

At Detroit, where after long contention settlement was in favor of an international airport near Windsor, Ont., for the Detroit Metropolitan area, Willow Run, once the airport for Ford's famed B-34 bomber plant, was selected for interim use until the international field is completed. Both Wayne County Airport and the proposed Northwest site were out of the picture, although there was a possibility that

Better Airports Urged

Lack of an interstate nationwide airport system is seen by C. Beckel Moore, president of PCA, as the chief basic hindrance to commercial aviation.

In a talk to reporters the Boston American Club, he cited Boston and Detroit as examples of cities which have not kept pace with aviation. Neither support nor accommodate front-line equipment.

Plan Against Politics—Moore said that, while political influence and backroom deals and city planners have not minimized aviation's potential growth, speed and action is needed in airport planning and construction. The PCA executive asserted that it does not want to make any specific recommendations, "but it is important that the public and the industry should be encouraged" if properly developed and introduced.

The protest was filed the day before expiration of the 30-day protest period required by state law, and came as a surprise to the Baltimore Aviation Commission. Not anticipating any such objection, it had employed a local firm, consulting engineers with high grades, to conduct a survey of the property and had a topographical survey recently completed. Hearing on the protest will be held late this or early next month.



Airline to Use Willow Run—Plans are being made by airlines serving Detroit for use of Willow Run airport, 20 miles from the city, as an interim field until the proposed international airport at Windsor, Ont., is completed. They may lease the field from the University of Michigan, which hopes to acquire the \$7,800,000, 1,450-acre inheritance from the RFFC for use as an aeronautical laboratory. The university's only obligation would be to keep the field in top condition for military use should the need arise. If the university's proposition is not accepted (about three weeks remain in which other governmental authorities may bid) for the property the carriers appear to negotiate for the site themselves.

reference to inadequacies of the city's recently purchased Pan American Airways 36th St. airport, have disclosed plans for development of a new mainline terminal through utilization of adjoining property.

Without giving details of construction details, Post Director Marcel Gagnon said the 36th St. field would be extended to include the Miami Amer. Air Base whenever the port authority can acquire it. The Army, however, consented with the 36th St. field, which recently was described in the Miami press as "possibly one of the worst in the western hemisphere" as a port of entry.

Planes Must Cross Road—Lack of hangar space at 36th St. has forced National Airlines to construct a new maintenance hangar across the road from the field's eastern boundary. To close off traffic while planes are being traced across the de-icing pad, traffic lights and gates will be installed and a watchman will be stationed at the crossing.

National plans to bring 600 additional employees and their families to Miami after the new hangar and overhead facilities are completed.

Newark, N. J.—Newark Airport, after four years of Army control, responded to commercial airlines by 85 flights daily to start 1945, punctuated by March 1, 150 by June 1, and 300 by Aug. 1. First tenures included American, Eastern, PCA, TWA, and United, with National and Northwest due to follow in mid-month and Colonial and Northeast March 1.

Denver—City planning a new terminal building, to cost more than \$1,000,000, with preliminary conferences held between the Denver Advisory Committee on Airport Construction, Aeronautical Radio, Inc., air lines, communications organization, postal authorities, CAD and others. Terminal would be built on land owned by the city just west of the present surface.

Kansas City—See Benigni, Utah state director of aeronautics, announced after conferences with government and air lines, Washington, that the \$1,000,000 ADAF distribution, subject Salt Lake Airport, probably will be made available to the city.

Wisconsin—Steps taken to request the War Department to cancel the Army's lease on Billy Mitchell field, with Sen. LaFollette announcing that return of the airport to Milwaukee county was likely in the near future.

88 Lades—Travel time between



TACA'S BIG THREE

TACA top executives are shown showing the Latin American Airline's position in its new effort at Miami. Left is right there are Thomas G. Martin, executive vice-president; Charles L. Gandy, traffic vice-president, and Elias R. Rodriguez, vice-president and general manager.

The city and Lambert-Brown Field expected to be reduced about 10 per cent from the current 14 through reduction of Statute to 14-mile road. The widened highway is expected to be ready for use next year.

Toledo—Ground is broken on April 1 for a new \$100,000 administration building. Features will be extensive use of glass, large windows giving a view of the field, and glass block partition.

Opala, Utah—Sketches for addition to the \$138,000 main part of Hildale Airport's administration building have been given United Air Lines and Western Air Lines engineers for study and suggestion. The building is to be completed this fall.

Salt Lake City—See Benigni, Utah state director of aeronautics, announced after conferences with government and air lines, Washington, that the \$1,000,000 ADAF distribution, subject Salt Lake Airport, probably will be made available to the city.

Riverside County, Calif.—County Board of Supervisors has approved a Master Airport Plan for the county, including 37 commercial and one military airport in the county and an additional commercial airport in adjoining San Bernardino County to serve the western part of Riverside.

Salem, Ore.—Supplies McNary Field was in process of formal transfer as the first Oregon service terminal by military authorities to

municipal use. Although sole user of the field at present is United, which has been operating under an agreement with the Army, the transfer order stipulates that the port remain open and unrestricted to public use.

Continental To Inaugurate AM 29 Service March 5

Continental Air Lines will inaugurate service over its recently rechristened Tulsa-El Paso AM 29 via Oklahoma City, Wichita Falls, Tex., Lubbock, Tex., and Hobbs and Clovis, N.M., on March 5, according to Robert St. president.

Two new Douglas C-47s daily will be operated along the route, maintenance of which was discontinued from Feb. 15 when strike slowed shipment of necessary aircraft parts.

Other new services:

American Overseas—Starter regular weekly flights to Amsterdam Feb. 27 via London, New York, 20 per cent more passengers than previous monthly service. Amsterdam-Wednesday afternoons and Saturday, New York Wednesday evenings. London-Wednesday afternoons, Friday evenings. Flights to Paris daily.

Trans-World—First weekly Washington-Dallas flight (Feb. 15). Second flight was added Feb. 16, route being via St. Louis.

United—New flight San Fran-Pearson via Los Angeles on AM 15 Feb. 18.

AAA Requests Cincinnati As Alternate on AM 49B

All American Aviation, claiming that American Airlines' interests are served at Huntington, W. Va., has requested the cancellation of its mail service on two main routes, has asked CAB to designate Cincinnati as temporary alternate terminal on AM 49B.

Extension of the route from Huntington to Cincinnati would establish transline air connections, thus eliminating delays now incident to use of surface transportation to transline points, AAA states. American will resume service to Huntington when improved airport facilities permit.

Price Ceilings Extended

Office of Price Administration has extended through June 30 ceiling prices for fresh fruits and vegetables shipped by air on an experimental basis. Originally issued for last August and September, the ceilings were found to be fair and equitable and therefore were extended through January. Further extension will give more time for experimentation with these perishable shipments.

Increased Mail Funds OK'd by House Group

Early expansion of both domestic and foreign service indicated in new appropriations.

The \$49,318,000 allocated for domestic airmail and \$49,000,000 for foreign airmail in the fiscal 1945 Post Office appropriation bill reported out of House Appropriations Committee last week reflected expanded services during the coming months. These allocations compare with appropriations for the present fiscal year of \$49,313,000 for domestic and \$49,384,000 for foreign.

A much bigger boom in foreign air mail service than is indicated by comparing the 1943 and 1945 fiscal year appropriations is anticipated by the Post Office Department. The \$60,000,000 for foreign service is regarded as a "taken" appropriation to prevent the Department from making payment to carriers during the winter and the Civil Aviation Board left word for foreign route expansion that the appropriation will be augmented.

Supplementary Appropriations Authorized—The \$49,306,000 approved for domestic service endorsed the Budget Bureau's recommendation by \$1,000,000, but supplemental domestic air mail allocations during the 2646, as the volume warrants, are anticipated by members of House Appropriations Committee. The Committee's cut was predicated in some measure on the fact that Post Office officials estimate that out of the \$412,000,000 allocation for the present fiscal year, only \$42,388,000 will be obligated.

Foreign Routes Covered—The \$5,000,000 appropriated for international airmail operations is allocated among seven routes. In addition, includes \$20,000 for airmail service in military planes and \$3,000 for charges at the Canal Zone.

Pen American's New York-London-London route is allocated \$750,000 of the foreign mail appropriation, and American Overseas Air Transport's application for a foreign air carrier permit (Docket 2146), originally scheduled this month, has been postponed indefinitely at BNAT's request.

Other Allocations—The remainder of the \$5,000,000 is apportioned as follows:

Colonial Airlines' New York-Montreal route, \$147,748; PAA's Miami-Brownsburg and New Orleans-Central and South America routes, \$23,364,394; PAA's Seattle-Portland route, \$783,200; Northwest

Airlines' Berger-Meridian route, \$45,318; American Airlines' Ft. Worth-El Paso-Mexico City route, \$25,431.

Testimony introduced at hearings by Post Office officials showed that foreign airmail operations grew from a loss of \$6,204,142 in 1943 to a profit of \$70,328,100 in 1944. Domestic airmail operations, which showed a loss in operation of \$5,116,244 in 1946 fiscal year, were carried on at a profit of \$30,682,000 in 1945. It was reported.

Several Contracts Increased—The \$49,000,000 allocated for domestic airline mail contracts will provide for suitable contract increases with several airlines. The \$50,000,000 was made available by the Budget Bureau for airmail contracts for the 1947 fiscal year, as follows (present fiscal year allocations in parentheses):

United Airlines, \$1,666,000 (1946, \$1,000,000); TWA, \$1,000,000 (1946, \$700,000); Pan American, \$1,000,000 (1946, \$500,000); PCA, \$1,000,000 (1946, \$500,000); U.S. Air Lines, \$1,215,000 (1946, \$1,000,000); American, \$1,000,000 (1946, \$1,000,000); Chicago and Southern, \$117,000 (1946, \$100,000); Delta, \$177,000 (1946, \$100,000); Eastern, \$1,000,000 (1946, \$1,000,000); National, \$1,000,000 (1946, \$1,000,000); Pan American, \$1,000,000 (1946, \$1,000,000); Pan American World Airways, \$1,000,000 (1946, \$1,000,000); and All American, \$675,000.

PCA Merge Vote Set

PCA stockholders will meet March 21 to vote on the proposed merger of Pennsylvania-Central and Northeast Airlines. Northeast stockholders will hold a similar meeting March 7. The merger, which will be subject to CAB approval, already has been sanctioned by directors of the two companies.

Hearing Postponed

Dates for exchange of exhibits and hearing of Royal Norwegian Air Transport's application for a foreign air carrier permit (Docket 2146), originally scheduled this month, have been postponed indefinitely at BNAT's request.

Adams Joins Aviation News

Charles L. Adams has joined AVIATION NEWS as transport writer, succeeding Raymond Crozier. Recently discharged after four years as the Navy, Adams formerly was employed by the Des Moines Tribune and *American Aviation*.

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Don't Forget The Private Flyer

At the close of the all-weather flying conference at the Pentagon Building CAA's opinion was that papers delivered at the conference support CAA's plans to proceed with the installation of the SCS-51 landing system—as reported on Page 34 of today's *News*.

It is true that several of the speakers commanded SCS-51, but it should be emphasized that the theme of the conference was transport flying. It is also true that SCS-51 is effective in transport operations, although some complaints about its reliability seem to apply in that sphere as well as others.

However, when CAA decides on a standard instrument approach and landing system to be installed nationally, it should seek a system that will prove practical and useful for all types of flying—private as well as transport. And there is great dissatisfaction among many private pilots with SCS-51. But the private pilot was excluded from any expression of his opinion during the week-long conference at the Pentagon.

Among complaints of private pilots are that SCS-51 requires far more experience in a plane than is possible in a personal aircraft; that the glide-path beam is unreliable and that when the transmitter is inoperative the indicator in the plane requires a correct approach; that too much experience is necessary for a private pilot to use the system safely.

The last complaint would appear to be the one to be given most consideration by CAA. Flying is the profession of airline pilots. They must keep up with

all developments and be proficient in all aspects of their profession. This, however, is not true of most private flyers. Few will venture to start a flight when they know with certainty that a landing must be made under instrument conditions. Despite this, there already are good chances that there are one or two occasions a year when many private pilots will have to make such a landing. In preparation for an emergency that may never come, most every private pilot performs the rigorous training that is necessary to acquire the skill of a transport pilot?

Certainly, if we have as many private aircraft flying by 1965 as CAA says we shall have, it would seem that the agency might well start planning realistically for them.

CAA now is undertaking tests at its Indianapolis experimental station on the radar ground control approach system which, advocates claim, can be used by anyone, and with no special equipment in a plane other than a transceiver. The agency is to be commended for thus exploring the chief alternative to SCS-51. But the ranks of private flyers would be relieved if CAA also would take cognizance of their doubts and publicly answer now how much consideration private flying will be given in this vital matter.

Such a course also might relieve a growing fear that CAA is neglecting the interests of private flyers in its entirely worthy endeavor to aid transport aviation.

Watching An Industry Disintegrate

JANUARY military aircraft deliveries slumped to 160, plus one glider. This is an annual production rate of well under 2,000 British schedules for 1946, as latest information, call for about twice as many aircraft as United States schedules. Australia, with less than a tenth of our population, will produce at least half as many military aircraft as we.

As far back as last October Great Britain built 666 warplanes, contrasted with our total, including gliders, of 470. In November the British score was 343 against our 334.

A rate of 2,000 aircraft a year is hardly two-thirds of the lowest level recommended by the Air Coordin-

ating Committee in its report last fall, and little more than one-third of the upper level recommended. Although, fortunately, research is well underway, the Nation's diversified aircraft industry cannot be maintained as a strong national defense arm on the present skim-appropriations or commercial orders.

Month by month our production of service-type aircraft so necessary to our national security sinks lower and lower and what was once the world's greatest aviation plant disintegrates still further. The Army, Navy, Congress and the White House still do nothing about a national air policy.

ROBERT H. WOOD



TO MOSCOW or MILWAUKEE





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